1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

deer Koryak, stone lamps have gone out of use, just as among the Chukchee. They are replaced by found iron frying-pans without handles, which are imported by Russian merchants. The Maritime Koryak relate that in olden times they also made clay lamps (sa'yek, "earthen or clay lamp:" from sa, "earth or clay;" and e'ek, "lamp") such as are still used by the Chukchee and Eskimo; but among the finds made in excavating ancient underground houses, I did not come across a single clay lamp. In one house I found a lamp made of a whale-vertebra (yu'ittemŋ'ek, i. e., "of bone of whale lamp"). It is represented in Fig. 100.

The lamp of the Maritime Koryak serves for lighting exclusively. Wood is used for heating and cooking. The hearth has been described before.[1] Driftwood is cut in summer and autumn for use as fuel. The wood is split into thin billets 50 cm. or 75 cm. long, which catch fire quickly and do not smoke much. It is stored away on the roof of the house.[2] The fire is started twice every day, — in the morning, on rising; and in the evening, before going to bed, — at the time of the two principal meals. The morning fire also warms the house for the day, the evening fire for the night. In the middle of the day the fire is rarely started. In general, the sedentary Koryak are saving of their fuel, even in settlements where there is no lack of wood. If guests arrive during the day, a fire is made to make tea and to warm the house.

Fig. 100 (1/10). Lamp made of the Vertebra of a Whale. Length, 14 cm.

To a certain degree, the lamp of the Reindeer Koryak heats the sleeping-tent in which it burns; but food and tea are prepared on the hearth, in the outer tent.[3] I have never seen food heated over the lamp in the sleeping-tent. Tea and boiled food are served by the women in the sleeping-tent. This, more than the lamp, aids in heating the sleeping-room. Over the lamp, however, wet footwear and mittens are hung to dry; but generally the drying of wet clothes is done in front of the hearth in the outer tent, or by freezing them out of doors, beating off the ice, and then warming them by the fire.

Properly speaking, the Koryak have no furniture whatever. The favorite position is sitting on the ground or on skins, with legs either crossed Turkish fashion or stretched out, or crouching. In the houses of the Maritime Koryak, the low thresholds which divide the sleeping-places from the middle part of the house are always used as seats; and in the outer tents of the Reindeer Koryak the sledges, which are brought in, and on which lie the bags of provisions, are utilized for this purpose.

[1] See p. 458. [2] See p. 459. [3] See p. 460.

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

Fig. 101 shows a stool of the Reindeer Koryak. It is made of reindeer-antlers still attached to the frontal bone. The beams and two tines of the antlers serve as legs, and two boards are tied to them to make the seat. This chair seems to be an imitation of a Russian bench. Nowadays, however, it is often found with the Reindeer Koryak. The Maritime Koryak also use, instead of chairs, the boxes in which they keep the tea-dishes. On Plate XX a girl is shown sitting by the fireside on such a box, and the other one is sitting in a crouching position. The use of tables is unknown to the Koryak.

Fig. 101 ($\frac{1}{11}$). Stool made of a Pair of Antlers. Height, 41 cm.

With the exception of the Russianized natives, they place a board or a trough-shaped dish on the skins on which they sit, and put the carved meat or fish, with seal-oil, on it. The people sit around and eat, taking up the pieces with their hands. Often the box in which the tea-dishes are kept serves as a table. Others have a table-board made of two or three planks, which is put on the box when they are eating, or drinking tea. However, in some houses of the Maritime Koryak, very small low tables, 30 cm. or 40 cm. high, may be found, at which the guests eat; but the Russianized Koryak of North Kamchatka and of the villages of the Okhotsk Sea south of the Gishiga River, who live in log-cabins, also use benches, chairs, tables, and beds, like their Russian neighbors.

With the introduction of metal cooking-vessels, these entirely superseded clay pots, and the method of cooking food by means of red-hot stones went out of use. Nowadays cooking is done only in iron and copper kettles imported by merchants. The Koryak prize copper kettles particularly, as they are durable; but they are not easily obtained, owing to their high price, and only the wealthy reindeer-breeders or Koryak engaged in trade or barter can afford to buy them. Such kettles last a very long time. Of course, the tin lining wears off very soon, but the Koryak continue to cook in them. The Koryak smiths of the villages Paren and Kuel have learned to make kettles from imported sheet-iron. In imitation of our metal waterpails, they give them the shape of a truncated cone, with a wire handle by which to suspend them over the fire. These kettles do not last long. The thin sheet-iron soon burns through, or is eaten through by rust in the damp summer.

At present the teapot is another metal appurtanance of the household. The dealers import chiefly copper pots, but some are found of enamelled white iron.

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

A stone bone-breaking set is one of the indispensable belongings of every household. It consists of a large stone slab or anvil, called ıl̨ño'ñın ("board-stone") and a stone pestle (cipe'iñm) or hammer. Both are selected from among the water-worn pebbles on the banks of rivers. The Koryak themselves do not work them into shape. The board-stone must have one smooth, even surface; and the hammer, an oblong shape, round at the ends. Two hammers are shown in Fig. 102. On the board-stone, bones are crushed with

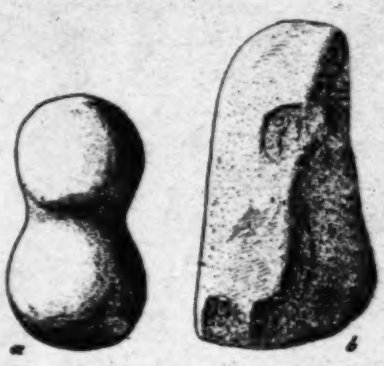

Fig. 102, *a* (1/11), *b* (1/11). Stone Hammers. Length, 12 cm., 17 cm. *a*, From Kamenskoye; *b*, From Tilqai River.

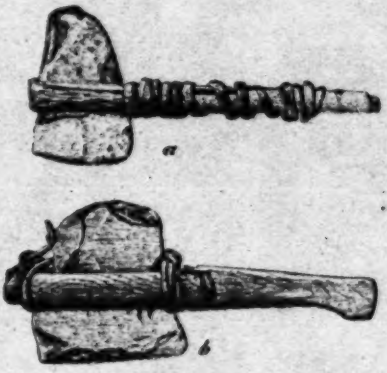

Fig. 103, *a* (1/11), *b* (1/11). Stone Hatchets. Length, about 30 cm.

the hammer to extract the marrow or to boil out the tallow for lighting; hard dried fish is softened on it or pounded with berries; roots are pounded for cooking gruel and for making puddings; and meat with fat is pounded for cutlets.[1]

Edible herbs, chiefly willow-herb (*Epilobium angustifolium*), are chopped on the stone anvil by means of stone hatchets. Two of these are shown in Fig. 103. The cutting-edge is sharpened by chipping, just like the edges of stone arrows and knives.[2] The handle of the hatchet *a* is made of a willow rod split in two and bent double, the hatchet being set between the two bent halves, the free ends of which are tied together with thongs. Another method of hafting is shown in *b*. The wooden handle is placed on one side of the hatchet, while on the other a short stick is applied, the ends of which are tied firmly to the handle. The grooved stone axe is held firmly between the two sticks.

The Koryak drink much water. They often get up in the night to take a drink of cold water, of which they always have a supply in wooden or

[1] See p. 578.

[2] See Chapter X.

1: Jochelson E-5 (1900-01) 1908 Ry4 Koryak Ry4

Instead of
514 a wooden chamber-vessel, rich reindeer-breeders use imported brass wash-
177 basins. Once when I had to remain over night at the tent of a wealthy
556 reindeer-breeder, I had to sleep in the same tent with the proprietors. As soon as I entered the inner tent, and before I had had time to warm up and drink my tea, the host, as a special mark of courtesy, brought in the brass basin and placed it in the corner of the tent.

262 Animal Food. — Animal food is the principal, if not the exclusive nourishment of the Koryak, particularly of the Reindeer Koryak, who use less vegetable food than do the Maritime people. Animal food consists of fish, sea-mammals, reindeer, mountain-sheep, bears, birds, and shell-fish.

262 Fish, fresh and sun-dried, is the main food of the Maritime Koryak.
252 During the summer and autumn, boiled fresh fish is eaten. The people are also fond of frying fresh fish on spits. Heads of fish are eaten raw, the cartilages being considered dainties. In winter, fish is eaten both cooked and raw. Raw fish is eaten frozen and sliced into thin chips. The eating of frozen fish is, however, much more widespread among the Arctic tribes west of the Stanovoi Ridge and among the Russians.

251 Dried fish (called by the Russian settlers "yukola") is prepared by the women on the river-bank or seashore during the summer fishing-season, and is preserved for winter use. Plate xxx, Fig. 2, shows how the women cut fresh dog-salmon for drying it in the sun. First the head is cut off, which is dried separately. Then the maw is ripped open with a knife, and the entrails are taken out. The roe is dried separately, and the flesh is cut in broad strips along both sides of the backbone. These strips remain joined at the tail, and are thus hung over the poles of the drying-frames. On sunny days the drying proceeds very fast. In three or four days the yukola is ready. In clear weather the preliminary drying is done on open drying-frames, as shown on Plate xxxi. When dry, the yukola is taken off from the drying-frames and hung under the platform of the storehouse. In autumn, when the nights are cold, and there is no danger of rot being caused by dampness, the dried fish are piled up and placed in the storehouse. The sun-dried fish is covered with a dry crust, beneath which the flesh remains soft, and the fat is preserved; but the process of air-drying rarely goes on without trouble. On hot days, in the absence of winds, numerous large flies settle on the fish, and lay their eggs. After two or three days, larvæ come out, which devour the juicy part of the yukola, and leave only a thin, dry, and tasteless layer on the skin. The preparation of the yukola fares still worse if foggy and rainy days prevail during the period of the main catch. Though hung up under special platforms or under the platform of the storehouse, the sliced fish does not dry, but begins to decompose, and the decaying pieces become detached from the skin and fall to the ground; so that in a wet summer, even when the catch of fish has been excellent, the Koryak

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

251 may remain with a scanty supply for winter use, owing to their ignorance of other methods of preserving fish than by sun-drying. The weather most favorable for preparing the yukola is during clear cool days, with a strong wind that scatters the flies. In general, yukola made of dog-salmon seemed [264] to me tasteless and dry; it cannot be compared with the fat juicy yukola made of the *Coregonidæ* of the Arctic rivers. Hence the Koryak, when eating dog-salmon yukola, dip it in seal-oil.

After the strips of meat for yukola have been cut off, some flesh still remains on the skeleton of the fish. A portion of this is cut off in thin slices, and dried in the sun on the sand or gravel of the river-banks. The skeletons of the fish are hung up to dry on ordinary drying-frames, and in winter serve as food for the dogs.

262 It is interesting to note that in cutting up herring, the ancient bone knife only is used. Such a knife, made of the jaw-bone of a white whale, 252 is represented in Fig. 108. All other fish is cut with modern iron knives. 412 This may be due to the convenience of the bone knife, — which is similarly still used by the Koskimo of Vancouver Island for cutting herring, — or it may be a taboo pointing to the fact that in former times herring played a more important part in the food of the Koryak than it does now. With reference to other species of fish, a taboo is observed of not cutting them across the body, but lengthwise only.

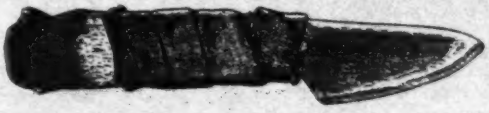

Fig. 108 ($\frac{1}{11}$). Bone Herring-Knife. Length, 22 cm.

251 I have already mentioned that in certain settlements, as in Itkana, where the catch of large salmon is small, the principal winter supply of fish consists of uyo'k *(Salmo socialis)*. This small fish is dried on the sand or gravel of the shore, on which it is spread in a thick layer. Heaps of fish are frequently turned over with rakes (Fig. 109) the teeth of which are made of

[412]

Fig. 109 ($\frac{1}{11}$). Fish-Rake. Length, 60 cm.

[262] reindeer-antler. This fish, like the dried dog-salmon, is eaten in winter, dipped in seal-oil; or it is mixed with roots and boiled, and eaten as a gruel. If the summer is rainy, the heaps of *Salmo socialis* turn into one mal-odorous mass, which freezes with the advent of cold nights. In Itkana every house-owner stores up for winter two or three storehouses full of this small fish.

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

In settlements where dog-salmon is the main supply, this species of smelt is eaten by men only in the years when no dog-salmon has been caught. In years when there is plenty of dog-salmon, it is used only for making a soup for the dogs.

Sea-mammals, mainly seals, occupy a prominent place in the household of the Maritime Koryak; but since the supplies do not hold out long, meat of sea-mammals is not eaten often. Towards spring, hardly any storehouse contains meat of sea-mammals. In summer and autumn their meat, particularly that of young ones, is consumed in large quantities, and considered a more toothsome food than fish.

The meat of seals and other sea-mammals is principally eaten boiled. There is reason to think that in former times meat was cooked in clay pots. Late in autumn, when the killed seals freeze, the Koryak preserve them entire, if not wanted for immediate consumption. At other times they are cut up right after the hunt, lest they decay. The blubber is cut into pieces and tried out. Until cold weather sets in, the oil is kept in bags made of a seal's stomach or of bladders. For this purpose a wooden pipe is inserted in the opening of the bladder or bag. It serves as a neck to the soft bottle, and is closed with a wooden or bone stopper, the edges of the bladder or stomach being fastened tight to the pipe with a sinew thread. In winter, seal-oil is frozen and cut with a knife as needed. The meat of gutted seals is cut into small pieces and placed in the storehouse in troughs or buckets, where it is preserved until cooking time. Seal-meat is sometimes dried in the sun in summer. It is cut into thin slices and hung up on the poles of drying-frames, or it is spread out on the ground. On journeys, seal-meat is also eaten raw, cut with a knife into small slices.

The meat of the white whale, on account of its taste, is prized more highly than seal-meat, and its oil is particularly well liked. The white-whale oil is entirely free from the unpleasant smell of seal-oil. A single white whale yields between six hundred and twelve hundred pounds, or more, of a light-colored oil, which congeals at 4° or 5° C. The fried skin of the white whale, too, is considered a dainty.

In Bering-Sea the meat of walrus and sea-lions is highly valued; but both animals are becoming more and more scarce, owing to their pursuit by poaching schooners. Walrus used to be particularly numerous in Karagha Bay and in the coves of Karagha Island. Even now, Koryak hunters, not only from the villages of Qare'nin and Kičhix, but also from Alut, undertake walrussing-expedition to Karagha Island in summer in their skin boats.

The reindeer is the source of the principal foodsupply of the Reindeer Koryak. The marrow, kidney, liver, gristle, and tendons of the legs, which are torn off with the teeth, are eaten raw, after the reindeer is killed. The marrow is treated as a dainty. It is obtained by breaking the bone with a

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

stone hammer or with a blow of the back of a large knife. On journeys, frozen raw meat, cut into thin slices is eaten; but reindeer-meat is generally eaten cooked. At present meat is cooked in iron or copper kettles. In winter, especially in the tents of wealthy reindeer-breeders, these kettles always hang over the fire in the outer tent, full of hot broth, which is not served on the table at the regular meals, but is used at all hours for quenching the thirst. Whoever wants a drink takes a small ladle and dips out some of the broth from the kettle. The herdsman, on coming home from the pasture, straightway refreshes himself with broth. The kettle is not cleaned. Meat, intestines, reindeer-tongues, and other parts of the animal, left from the previous cooking, are thrown into the broth. The meat is cooked for a short time, for the Koryak do not like it well done. The kettle is full of dirt from the hands of the cooks, and of reindeer-hair, which drops in with the unwashed meat; but that does not prevent the broth from being a refreshing drink. When the liquid in the kettle runs too low, water is added or snow is thrown in. Thus the kettle is kept full until the camp is broken up to be moved to another place. The women serve cooked meat in the inner tent. After it has been cut into pieces, it is placed on boards, wooden platters, or troughs. The Koryak take hold of a chunk of meat with the left hand, and, holding it with their teeth, cut off a mouthful with a knife held in the right, cutting from below upward. All Siberian natives eat meat in the same manner. For journeys, meat-cutlets are made of raw meat by pounding meat and reindeer fat with a stone hammer. If edible roots are at hand, they are added.

However, the food of the Reindeer Koryak does not consist of reindeer-meat alone. To a considerable degree they resort to the fish and sea-food of the Maritime Koryak; just as the latter, in winter, purchase reindeer from the Reindeer Koryak. Wealthy reindeer-breeders who wander far from the sea-coast, use almost no fish at all, and even less sea-mammals. They catch fish only in summer in mountain-rivers in small nets or weirs, but do not store it up for winter. Besides, the catch in mountain-rivers is insignificant.[1] They eat sea-food and dog-salmon only when people from the coast import them, or when one of their own number visits the coast in winter.

Those who own small herds of reindeer and do not tend the herds of wealthy herd-owners, but wander about alone, must procure supplies of fish for winter, since they cannot afford to kill many reindeer. These poor reindeer-breeders go out in summer to the mouth of some river or to the sea-coast, and there dry fish for winter use. On occasion they also kill sea-mammals, but usually they own no skin boats, and do not go out to sea to hunt. Some wealthy reindeer-breeders — for instance, those on the west

[1] See pp. 529, 534.

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

262 233 556 side of the Taigonos Peninsula, who wander with their herds near the Russian villages or near the main trail, and are often visited by Russians on their dog-sledges — send out in summer several members of their families to prepare a supply of sun-dried fish for winter use, and for food for their guests and for their dogs, that they may not have to kill too many reindeer for this purpose. A whole small reindeer suffices for but a single feeding of a team of ten or twelve dogs.

262 574 437 Generally speaking, the Reindeer Koryak are very fond of eating dried dog-salmon and "sea-morsels," (i. e., the meat and blubber of sea-mammals). They seek every opportunity to satisfy this craving, which is possibly a survival from a period when the present nomadic reindeer-breeders were still maritime hunters. As soon as the snow is in good condition for driving, the Reindeer Koryak begin to appear on sledges in the villages of the Maritime Koryak to obtain "sea-food," and barter entire carcasses of frozen seal, oil, dog-salmon, and skin of the white whale. Each Reindeer Koryak has among the Maritime people a friend who supplies him with sea-food, and who, in his turn, later on visits the nomad camp of the Reindeer Koryak to get reindeer-meat.

262 With all the craving of the Reindeer Koryak for the "sea-morsels," they dislike subsisting long on sea-food. Thus a wealthy Taigonos reindeer-breeder told me that his sons had lived too long on the coast, subsisting on fish and seal alone, and had become completely worn out. He then went to his herd and killed a reindeer for them, that they might regain their strength. On the other hand, the Maritime Koryak like to obtain reindeer meat and fat, even when they have plenty of fish; while in winter, when fishing is poor, they often visit the nomad camp of the Reindeer Koryak either to buy reindeer-meat or to obtain it by begging.

223 In describing bird-hunting,[1] I mentioned that its economic importance is slight. The Koryak do not like sea-gulls, and consider them tasteless; but 262 when food is scarce, they do not disdain them. Early in summer, previous to the fishing-season, the Maritime Koryak eat all kinds of sea-fowl; but when fishing and sealing begin, bird-hunting ceases. The Koryak are very fond of birds' eggs. During the nesting-season they undertake expeditions to the islands in skin boats to gather eggs, which are collected by hundreds and eaten boiled right after they have been gathered, or on the following days. [252] They do not discriminate between new-laid and rotten eggs. Once I was present when some Koryak were eating boiled eggs which were so decomposed that a strong odor was noticeable a long way off. In many eggs there were already half-hatched birds, but this did not in the least prevent the Koryak from relishing their food.

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[1] See p. 557.

1: Jochelson E-5 (1900-01) 1908 Ry 4 Koryak Ry 4

the mice resort to suicide by hanging themselves in the crotches of branches. The following roots are dug out of mice-holes: bulbs of martagon (*Fritillaria sarana*); *Claytonia acutifolia* Wild, called "sweet-root" by the Russians, ṙnat by the Koryak; roots of wild sorrel (*Polygonum polymorphum*); the root called me'tčin by the Koryak and "bitter-root" by the Russians; and the roots of sedge grass (called pa'lxo by the Koryak). All these roots are eaten both raw and cooked. When eaten raw, they are dipped in seal-oil or pounded with roe. They are cooked with fish and reindeer-meat, either in the form of a porridge made of roots ground together with fish, or by cooking roots in seal or reindeer blood.

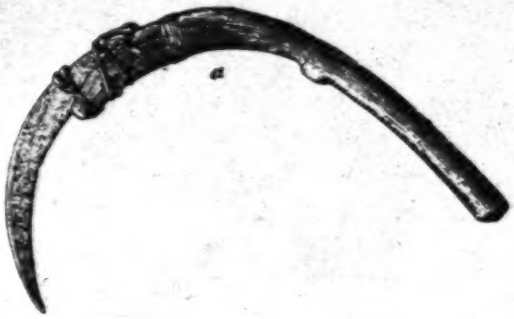

Fig. 111, *a* ($\frac{1}{11}\frac{1}{17}$). *b* ($\frac{1}{11}\frac{1}{17}$). Picks for gathering Roots. Greatest length, 56 cm., 37 cm.

Willow-herb (*Epilobium angustifolium*; Koryak, mɛ'nmet occupies the first place among edible herbs. The stems of willow-herb are dried in bunches in the sun or over the hearth, and are chopped with stone hatchets (see Fig. 103). Pieces of seal-blubber or reindeer-fat are dipped into the powder thus obtained, and are thus eaten. The flour is also made into a pudding by grinding the crushed herb with berries and melted seal-oil. In Kamchatka the pith is taken from the split stems, dried in the sun, and stored away for winter use. The fresh leaves of willow-herb are used instead of tea, when the latter is lacking. In northern Kamchatka the Koryak use for food the stem of the sweet *Heracleum spandilium*.

Berries as well as roots are used fresh, raw, or cooked in porridge made of blood, or of cooked fish or meat. Berries also form an ingredient in puddings made of ground fish-roe, fat, and pounded fish. A favorite dish is furnished by the pounded flesh of sun-dried dog-salmon mixed with seal-oil and bleaberries. This mixture is pounded in wooden trays or dishes with wooden or bone pestles. A bone pestle is represented in Fig. 112. The following is a list of the principal berries used: *Empetrum nigrum*, *Vaccinium uliginosum*,

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

Vaccinium Vitis idæa, *Rubus chamæmorus*, and also *Lonicera cærulea* and *Prunus padus* (in northern Kamchatka). Bleaberries (*Vaccinium uliginosum*) are considered the best. In Kamchatka the fruit of *Prunus padus* is crushed, and dried in the sun in the form of flat cakes.

Puddings made of crushed berries, roe, fish and seal oil, are frozen and then eaten, pieces being chopped off with a knife. These puddings are considered a treat for visitors, and excellent travelling-provisions.

Fig. 112 ($\frac{1}{11}$). Bone Pestle. Length, 23 cm.

Berries are picked in summer and autumn. The Reindeer Koryak have more opportunity than the Maritime Koryak to pick the cloudberry (*Rubus chamæmorus*), which grows in the tundra; but they do not store it, and they eat it right after picking.

Other food-plants are the fruit of the wild rose (*Rosa alpina* Pall.), the mountain ash, sea-colewort, cedarnuts, and willow-bark. Sea-colewort (*Alaria esculanta;* Koryak, me'ĉgomei) is eaten not only by the Maritime Koryak, but also by the Reindeer Koryak when hunting on the seacoast in summer. It is cut with a knife, and cooked with seal or reindeer blood, or also with reindeer-meat. Cedar-nuts are gathered late in autumn, extracted from their cones, and preserved in small skin bags. It is interesting to note that the Koryak eat the nuts with their shells on. The inner portion of willow-bark is also consumed. It is stripped off the trees, crushed with a stone hammer, and cooked with fish. It is also chewed raw.

To the vegetable foods used by the Reindeer Koryak must also be added the contents of the reindeer's first stomach, which consists of reindeer-moss not completely digested. This greenish mass is cooked with reindeer-blood. This food, however, is now beginning to drop out of use. Wealthy reindeer-breeders usually throw away the contents of the reindeer stomach; but when other food is lacking, the herdsmen eat them.

The winter supplies of berries, roots, and other edible plants, are not large, and do not figure as an essential or constant ingredient of nourishment. Towards the middle of winter, hardly any supplies of vegetable food are left; and towards spring, when animal food is about to give out, all the vegetable food has been consumed.

Flour and rice are sold by Russian dealers. These products may also be found at the government depot in Gishiga, where they are sold to the natives at cost price.

The Koryak are very fond of these imported vegetable products, particularly of rice, of which gruel is cooked and eaten with seal-oil or reindeer-fat. They like wheat flour, but not rye flour. It is mixed with water or blood, and

1: Jochelson E-5 (1900-01) 1908 R74 Koryak R74

171 32 the Koryak. True, Steller and Krasheninnikoff[4] visited them after they had been considerably influenced by Russian culture; but, in speaking of the ancient Kamchadal method of cooking food, they mention only boiling in wooden troughs by means of red-hot stones, and there is nowhere in the writings of these authors a reference to clay vessels. Schrenck considers the absence of pottery among the Kamchadal as proved.[1]

171 252 I have found accounts which stated that the Koryak also used red-hot stones for boiling. However, in these statements I do not see any contradiction to the fact that there are traces of the existence of pottery among them. The latter, to my mind, seems a later invention than boiling by means of red-hot stones; but, even after the invention of pottery, cooking by means of red-hot stones might have continued.

171 174 323 But as iron kettles were acquired, the manufacture of clay pots probably disappeared earlier than the custom of boiling with stones in troughs, as may have been the case with the Kamchadal. Witsen[2] states, based on information given by Cossacks, that the Kamchadal used to make clay vessels. In an old underground Kamchadal dwelling, Dittmar found "small clay vessels" of most primitive workmanship. "The clay crumbled under the hands, it had evidently been badly (if at all) baked," says Dittmar. As the pots were saturated with blubber, Dittmar thinks it possible that they had been lamps, and not cooking-pots;[3] but this opinion may be offset by the shape and size, especially the depth, of the pots found.[4] Besides, in another passage, Dittmar quotes the tale of an old Kamchadal who brought to him the stone implements that he had dug out

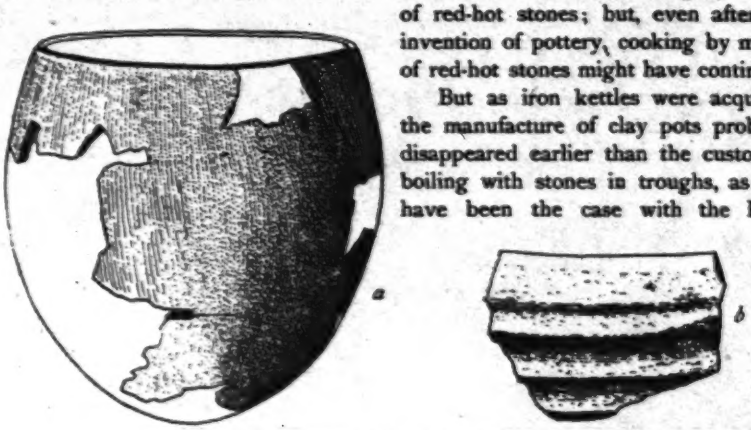

Fig. 165, *a* ($\frac{1}{11}$), Pottery Vessel; *b* ($\frac{1}{7}$), Rim of Pottery Vessel.

[1] Schrenck, II, p. 140.

[2] See Witsen, Noord en Oost Tartarye, 1705, p. 673.

[3] See Dittmar, p. 213.

[4] Dittmar gives the following measurements of the pots: upper diameter, 12 cm.; lower, 10 cm.; maximum width, 14 cm.; depth, 10 cm. This vessel, therefore, had an aperture smaller in diameter than the middle part, and its bottom was still smaller than the aperture. Clay lamps are of different shape (see Bogoras, The Chukchee, Vol. VII of this series, Figs. 102, 103, pp. 185, 186; Nelson, Plate XXVIII). Nelson gives 2½ inches (i. e., less than 7 cm.) as the depth of two lamps (Nelson, p. 64). The Koryak stone lamps (see p. 566) are 4–6 cm. deep.

11: Kennan--179-180 T-3 (1865) 1870 Koryak
116, 252, 262, 278 Reindeer

"This mixture, known among the Koraks as 'manyalla,' is eaten by all the Siberian tribes as a substitute for bread, and is the nearest approximation which native ingenuity can make to the staff of life. It is valued, we were told, more for its medicinal virtues than for any intrinsic excellence of taste, and our limited experience fully prepared us to believe the statement. Its original elements are clotted blood, tallow, and half-digested moss taken from the stomach of the reindeer, where it is supposed to have undergone some essential change which fits it for second-hand consumption. These curious and heterogeneous ingredients are boiled up together with a few handfuls of [180] dried grass to give the mixture consistency, and the dark mass is then moulded into small loaves and frozen for future use. Our host was evidently desirous of treating us with every civility, and, as a mark of especial consideration, bit off several choice morsels from the large cube of venison in his grimy hand, and taking them from his mouth, offered them to me."

23: Krasheninnikov N-3 (1736-40) 1764 Koryak

deer are killed or have died lately. For particular gueſts, indeed, they will kill ſome of their ſtock, and at ſuch times only they have a hearty meal. They never milk the rein-deer, nor know any uſe of milk. They eat their fleſh for the moſt part boiled, and what they do not conſume immediately they dry with the ſmoke in their huts. One of their principal diſhes is called *yamgaya*, which is made thus; they put the blood of the beaſt mixed with ſome fat into its ſtomach or paunch, which they hang up and ſmoke. Our Coſſacks reckon this a great delicacy. Beſides, the *Koreki* eat every other animal except dogs and foxes. They uſe, in general, neither herbs, roots, nor barks of trees; but the poor feed on them in time of great ſcarcity; nor will any catch fiſh, except the deer-herds, and that very ſeldom. They make no proviſion of berries for the winter, but only eat them freſh in the ſummer. They think nothing can be ſweeter than cranberries beat up with the root ſaran and deer's fat. I had an opportunity of ſeeing one of their chieftains exceedingly ſurpriſed upon the firſt ſight of ſugar, which he took for ſalt; but taſting it was ſo pleaſed with its ſweetneſs, that he begged ſome pieces to carry to his wives: but, as he was not able to reſiſt the temptation of ſo delicious a rarity, he ate it all up on the road; and when he came home to his houſe, although he ſwore to the women that he had taſted ſalt ſweeter than any thing he had ever taſted before, yet they would not believe him, inſiſting that nothing could be ſweeter than cranberries with deer's fat and lilly-roots.

They ride only in the winter time on ſledges drawn by rein-deer, but never mount upon their backs in the ſummer, as they ſay the *Tunguſi* do. Their ſledges are made about a fathom long: the ſides are about four inches thick, but rather thinner at the fore part, where they are bent upwards: the two ſide-pieces are joined together by ſmall pieces of wood. They yoke two